



Office of Information Technology Services

Application Portfolio Management Tool

Application O&M Cost Guidelines

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1 Document History

1. Revision History

| Revision # | Revision Date | Description of Change | Author |
|------------|---------------|-----------------------|------------|
| 1.0 | 7/18/2006 | Initial Document | J. Tulenko |

2 Purpose

The purpose of this document is to assist users of the Application Portfolio Management (APM) component of the Portfolio Management tool with information on how to enter operating and maintenance cost information into APM. This document assumes that the reader is familiar with the concepts of application portfolio management and has a working knowledge of the Portfolio Management tool itself.

3 Application Cost Methodology

3.1 Introduction

Under increasing pressure to obtain greater value from taxpayer dollars, state government must explore opportunities to maximize return on investment through innovation and technology. Application Portfolio Management (APM) is the approach chosen by the State of NC to inventory, assess, and develop management plans for individual applications, as well as agency-wide and state-wide application portfolios. Applications are assessed using a variety of evaluation criteria including alignment with strategic missions and governmental priorities, benefit and value to government programs and agency business, performance (business, operational, and technical), operating and maintenance costs, technical architectural fit, and risk.

This document has been created to assist state agencies to understand the nuances of collecting application costs in the current state government environment. The intention is to provide a preferred application cost methodology to guide agencies towards a standardized process.

The following topics are discussed in detail within this document:

- Estimation Overview
 - Confidence Level
 - Estimation Guidelines
 - Non-Operating Costs
- Portfolio Management Tool Cost Structure
 - Cost Period
 - Application Cost Structure
- Level 4 Cost Categories
 - Internal Personnel
 - External Personnel
 - Other External Costs
 - Infrastructure – Hardware
 - Infrastructure - Software
 - Other

- Additional Information for Level 4 Cost Categories
 - Direct Application Costs
 - Indirect Application Costs
 - Inter-Agency Application Costs
- NCAS Mapping of Expenditure Accounts to Level 4 Cost Category

3.2 Estimation Overview

At this time, not all agencies are prepared to identify all costs at the application level. Therefore, it may be necessary to estimate cost values or to allocate pooled costs among applications. Estimation assumptions and allocation methodologies are the responsibility of the agency, but this document provides some guidance on developing consistent and appropriate approaches.

While the Portfolio Management tool is not intended to be a formal financial accounting system, it does provide managerial accounting figures. Total costs per application should be as comprehensive as possible. Estimates and allocations are better than omissions, but they may compromise the accuracy of analysis. Agencies should note the extent to which cost figures are fact-based by indicating a Confidence Level for each application, as explained below.

3.2.1 Confidence Level

The Application Information tab includes a confidence level rating question that refers to the costs entered on the Application Budget Cost tab. The agency must specify its level of confidence in the accuracy of the application cost estimates as reflected below:

Order of Magnitude – Represents the lowest confidence level with an error range between +75% and –25% (e.g., an application with an “order of magnitude” estimate of \$100,000 means that the actual cost should fall between \$175,000 and \$75,000).

Budget Estimate – Indicates the middle confidence level with an error range between +25% and –10% (e.g., an application with a budget estimate of \$100,000 means that the actual cost should fall between \$125,000 and \$90,000).

Definitive Estimate – Represents the highest confidence level with an error range between +10% and –5% (e.g., an application with a definitive estimate of \$100,000 means that the actual cost should fall between \$110,000 and \$95,000).

3.2.2 Estimation Guidelines

Agencies should make a reasonable effort to report all material costs of operating and maintaining an IT application. To determine the appropriate level of effort needed to collect and report operating cost data, agencies should consider how often the data

must be updated and how the data will be used. Many groups of decision makers will use the cost data from the Portfolio Management tool Application Portfolio module:

- Agency leadership will use the cost data for trend analysis, in decisions to enhance or retire/replace an application, or to justify an expansion budget request.
- OSC will report the current fiscal year actual cost data as part of the annual Information Technology Expenditures Report.
- OSBM and ITS will review cost data when considering expansion budget requests.
- Legislative staff will use cost data to monitor the state's total investment in information technology.

Application IT costs includes the costs inside the IT division of an agency as well as the IT costs in the business unit. Many agencies can identify the total budget/cost of their IT division. However, only allocating the cost of the IT department to applications may miss material direct or indirect application costs accounted for in other segments of the agency. Review the entire agency budget when creating a costing methodology. Agencies should include at least all direct costs and all material indirect costs of operating and maintaining the application. IT costs that are not associated to a specific application (or project) will not be captured in the Portfolio Manager tool.

3.3 Portfolio Management Tool Cost Structure

UMT Portfolio Manager™ stores and tracks cost data on an application- or project-centric basis.

3.3.1 Cost Period

Within the Portfolio Management tool, the period to capture budget, actual, and forecast application costs (and the associated application roadmap timeline) is determined by a set of attributes:

- **Analysis Start Date** – set to the date the application went into production, but not earlier than 7/1/2005 for the purposes of capturing costs.
- **Estimated Lifespan** – set to 60 months (although application may last long past 5 years, this gives the required range for capturing costs)
- **Retirement Date** – set to the date application is to be retired. If unknown at this time, set to the end of the estimated lifespan.

We are currently using a standard capitalization period of 60 months for projects (project end date + 60 months) to capture operations and maintenance costs. Consistent with this, we are using 60 months as the Estimated Lifespan.

| | | | |
|-------------------------------|-----------|---------------------------|----------|
| Analysis Start Date * | 7/1/2005 | Initial Production Year * | 2005 |
| Estimated Lifespan (months) * | 60 | Retirement Date | 7/1/2010 |
| Latest Release | 1/30/2006 | System Age | 1 |

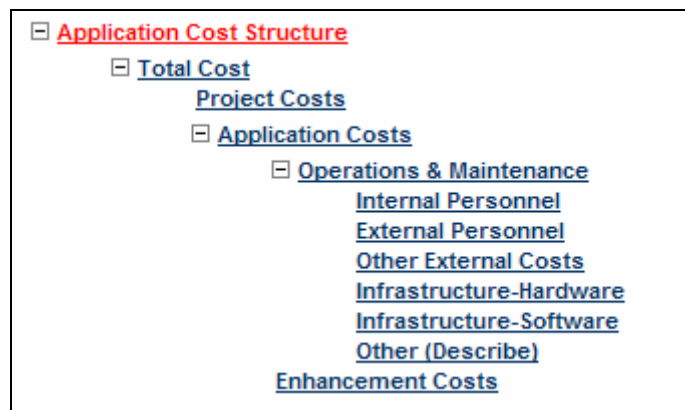
Release Notes

Application Roadmap

| 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|----------|----------|---------|----------|----------|---------|
| Maintain | Maintain | Enhance | Maintain | Maintain | Replace |

3.3.2 State of North Carolina Application Cost Structure

The following is a view of the Application Cost Structure:



Agencies are only required to enter application costs starting with the current fiscal year (July 2005-June 2006). Actuals costs should be entered for this fiscal year and budget costs for the 5 years starting with this fiscal year. Agencies are required to enter the operating and maintenance costs at Level 4 within the Portfolio Management tool.

3.4 Level 4 Cost Categories

Listed below are general descriptions of costs to be included in each Level 4 category. A detailed listing of NCAS expenditure account codes mapped to each Level 4 category is located at the end of this document.

Internal Personnel

Includes salaries (regular and overtime pay, longevity and bonus pay, etc.) and employer paid benefits (FICA match, retirement match and medical insurance, etc.)

Personnel costs should be included for employees who support the application. They should **not** be included for employees that are primarily **users** of the application. The following may help distinguish between these two categories:

Application Support Personnel – someone who has a primary job responsibility to support /upgrade an application (e.g., a Data Base Administrator (DBA)) or someone who has Help Desk responsibilities for an application (i.e., someone who is responsible for assisting Application Users when they encounter problems with the application.)

Application User – someone who accesses an Application but whose job function does not involve maintenance or help desk responsibilities for the Application, someone who is “helped” in his/her job function by use of the Application.

External Personnel

Purchased contractual services specifically for IT services

Other External Costs

Other purchased services for communications and data processing (telephone service, internet services, telecommunications charges, etc.)

Infrastructure – Hardware

Purchase, rent/lease, repair, or maintain computers, servers, printers, video equipment, etc.

Infrastructure – Software

Purchase, rent/lease, or maintenance of software for mainframes, pc's, servers, networks, etc.

Other

Any other application costs not included above

3.5 Additional Information: Level 4 Cost Categories

3.5.1 Direct Application Costs

Direct costs are those costs that can be logically traced to an application, or to multiple applications. For example, the expense for a DBA who supports two applications is a direct cost for those two applications. Another example is the annual vendor maintenance cost for an application.

Shared costs should be allocated on a basis that reasonably approximates actual cost. Costs attributable to the above DBA might be split between the applications based on a timekeeping system (if available), number of users served, number of help desk calls answered, etc. Hardware and software costs could also be allocated on a similar basis.

Direct application support costs such as registration or course fees for staff training and travel expenses should be included as other application costs.

3.5.2 Indirect Application Costs

Indirect costs are generally considered overhead and are not directly attributable to any particular application(s), but are incurred as a result of overall operating activities. These are generally segregated into IT and non-IT costs.

IT Indirect Costs

Some examples of IT indirect costs are: communications and networking costs and Agency "Technical" Management Team (i.e., CIO, etc) salary + benefits.

In general, IT indirect costs do not have a significant impact on the total costs of an application and are often difficult to determine on a per application basis. In either of these cases, the agency does not need to include IT indirect costs as part of the application costs. However, if the IT indirect costs are significant on a per application basis and are obtainable with a reasonable effort, they should be included in the APM application costs.

Non-IT Indirect Costs

Some examples of non-IT overhead costs are: building rent, electricity, and Agency "Business" Management Team (i.e., Agency CFO, etc.) salary + benefits. Non-IT overhead costs **should not** be included in the application costs within the Portfolio Management tool.

3.5.3 Inter-Agency Charges

Some agencies incur costs for applications they do not own. For agencies who own an application that is used and funded by other agencies, the owning agency should enter the cost in the Receipts/User Fees cost center for that application.

For agencies that pay computing fees for an application owed by another agency, the expense should be treated as direct application cost if the charge is directly related to a specific application. As with the indirect IT costs, these costs only need to be included if they are significant on a per application basis and can be obtained with a reasonable effort.

Some specific examples:

- 1) DOR pays ITS for accessing the NCAS system, which is owned by OSC. The treatment by DOR is that the NCAS expense should be included in cost of Application "A" if the charge for NCAS is related to Application "A" (or split between Application "A" and Application "B" if related to "A" and "B").
- 2) Multiple agencies pay ITS processing charges for the use of DOT data. They should include these expenses as a cost of the appropriate application if related to an application.
- 3) Statewide NCMail. NCMail costs should be assigned to employees and allocated according to above recommendations, depending on employee classification as an Application User or Application Support Personnel (see above). (Note, the costs in this example may not be significant enough to include in the APM cost data).
- 4) Hosting Charges. When hosting charges are charged from ITS to other agencies based on specific application(s), the agency should include the charge paid to ITS as a cost within Portfolio Management tool cost structure for those application(s).

4 NCAS Mapping of Expenditure Accounts to Level 4 Cost Category

The following is a detailed mapping of NCAS expenditure accounts to the Level 4 cost structure in the Portfolio Management tool. This list may change as accounts are added to the NCAS chart of accounts.

Categories include all 9 or 11 digit accounts that begin with the below listed codes:

Internal Personnel

531xxx Salaries and Benefits

External Personnel

532140 OTH INFORMATION TECH SVCS
532141 WAN SUPPORT SERVICES

| | |
|--------|--------------------------|
| 532142 | VIDEO TRANSMISSN SUPPORT |
| 532143 | LAN SUPPORT SERVICES |
| 532144 | PC/PRINTER SUPPORT SVC |
| 532145 | SERVER SUPPORT SVC |
| 532146 | MAINFRAME SUPPORT SVC |
| 532147 | IT SEAT MANAGEMENT SVC |

Other purchased contractual services accounts (e.g. 532199) if used in lieu of a 53214xx account.

Other External Costs

| | |
|--------|---------------------------|
| 532811 | TELEPHONE SERVICE |
| 532812 | TELECOMMUN DATA CHRG |
| 532813 | TELECONFERENCE CHARGES |
| 532814 | CELLULAR PHONE SERVICES |
| 532815 | EMAIL AND CALENDARING |
| 532816 | VIDEO TRANSMISSION CHARGE |
| 532817 | INTERNET SERV PROV CHARGE |
| 532818 | DATA WIRING SVC CHRG |
| 532819 | TELEPHONE WIRING SVC CHRG |
| 532821 | COMPUTER/DATA PROCESS SVC |
| 532822 | MANAGED LAN SVC CHARGE |

Infrastructure – Hardware

| | |
|--------|---------------------------|
| 532332 | REPAIRS-OTH COMPUTER EQP |
| 532334 | REPAIR-WAN EQUIP |
| 532335 | REPAIR-VIDEO TRANSMN EQP |
| 532336 | REPAIRS-LAN EQUIP |
| 532337 | REPAIRS-PC/PRINTER |
| 532338 | REPAIRS-SERVERS |
| 532443 | MAINT AGRMT-OTHER DP EQP |
| 532444 | MAINT AGRMT-WAN EQUIP |
| 532445 | MAINT AGRMT-VIDEO TRAN EQ |
| 532446 | MAINT AGREE-LAN EQUIP |
| 532447 | MAINT AGREE-PC/PRINTER |
| 532450 | MAINT AGREE-SERVER EQUIP |
| 532451 | MAINT AGREE-MAINFRAME EQP |
| 532523 | RENT/LEASE-VOICE COMM EQU |
| 532530 | RENT/LEASE-OTHER DP EQP |
| 532531 | RENT/LEASE-WAN EQUIP |
| 532532 | RENT/LEASE-VIDEO TRAN EQU |
| 532533 | RENT/LEASE-LAN EQUIP |
| 532534 | RENT/LEASE-PC/PRINTER |
| 532535 | RENT/LEASE-SERVER EQUIP |
| 532536 | RENT/LEASE-MAINFRAME EQP |
| 534355 | COMMUNICATION CABLE CONTR |
| 534455 | OTH STR-COMM CABLE CON |
| 534528 | EQUIP-VOICE COMMUNICATION |
| 534530 | OTHER DP EQUIPMENT |
| 534531 | WAN EQUIPMENT |
| 534532 | VIDEO TRANSMISSION EQUIP |
| 534533 | LAN EQUIPMENT |
| 534534 | PC/PRINTER EQUIPMENT |
| 534535 | SERVER EQUIPMENT |
| 534536 | MAINFRAME EQUIPMENT |

Infrastructure – Software

| | |
|--------|----------------------------|
| 532441 | MAINT AGRMT-OTHER SOFTWARE |
|--------|----------------------------|

| | |
|--------|---------------------------|
| 532442 | MAINT AGRMT-WAN SOFTWARE |
| 532448 | MAINT AGREE-PC SOFTWARE |
| 532449 | MAINT AGREE-SERVER SOFTWR |
| 532452 | MAINT AGREE-MAINFRME SFTW |
| 532541 | RENT/LEASE-PC SOFTWARE |
| 532542 | RENT/LEASE-SERVER SOFTWR |
| 532543 | RENT/LEASE-MAINFRAME SFTW |
| 534711 | OTHER COMPUTER SOFTWARE |
| 534712 | WAN COMPUTER SOFTWARE |
| 534713 | PC SOFTWARE |
| 534714 | SERVER SOFTWARE |
| 534720 | MAINFRAME SOFTWARE |
| 534730 | EXTERNAL DEVELOP SOFTWARE |

Other

Any other account not listed above that includes application costs